

CLAIMS

1. A recording medium having:

a first area on which data that has been encoded with a first error correction code is recorded;
5 and

a second area on which data that has been encoded with the first error correction code and data that is decodable with a second error correction code that is different from the first error correction code
10 are mixedly recorded,

wherein data that causes the cumulated value of a DC component per unit period of the data reproduced from the second area to deviate is recorded in the second area.

15 2. The recording medium as set forth in claim 1, wherein the data decodable with the second error correction code contains the data decodable with the first error correction code, and

20 wherein the data of which the cumulative value of the DC component deviates is contained in the data decodable with the first error correction code.

3. The recording medium as set forth in claim 2, wherein the data recorded in the first area and encoded with the first error correction code has
25 been encrypted with at least encryption key data, and

wherein the data decodable with the second error correction code composes at least a part of at

lest the encryption key data.

4. The recording medium as set forth in claim 3,
wherein the data decodable with the first
error correction code is placed in the data decodable
with the second error correction code so that when the
data decodable with the second error correction code is
decoded with the first error correction code, the data
decodable with the first error correction code
represents a predetermined error pattern in accordance
with the encryption key data.

5. The recording medium as set forth in claim 4,
wherein at least part of the data decodable
with the first error correction code is dummy data.

6. The recording medium as set forth in claim 1,
wherein information that represents the
position of the second area is recorded on the
recording medium.

7. A recording method, comprising the steps of:
recording data that has been encoded with a
first error correction code to a first area of a
recording medium; mixedly recording data that has
been encoded with the first error correction code and
data that is decodable with a second error correction
code that is different from the first error correction
code to a second area of the recording medium; and
recording data that causes the cumulated
value of a DC component per unit period of the data

reproduced from the second area to deviate to the second area.

8. The recording method as set forth in claim 7, wherein the data decodable with the second error correction code contains the data decodable with the first error correction code, and

wherein the third recording step is performed so that the data causing the cumulative value of the DC component to deviate is contained in the data decodable with the first error correction code.

9. The recording method as set forth in claim 8, wherein the first recording step is performed so that the data recorded in the first area and encoded with the first error correction code has been encrypted with at least encryption key data, and

wherein the data decodable with the second error correction code composes at least a part of at least the encryption key data.

10. The recording method as set forth in claim 9, wherein the second recording step is performed by placing the data decodable with the first error correction code in the data decodable with the second error correction code so that when the data decodable with the second error correction code is decoded with the first error correction code, the data decodable with the first error correction code represents a predetermined error pattern in accordance

with the encryption key data.

11. The recording method as set forth in claim 10,
wherein at least part of the data decodable
with the first error correction code is dummy data.

5 12. The recording method as set forth in claim 7,
further comprising the step of:

recording information that represents the
position of the second area to the recording medium.

13. A recording apparatus, comprising:

10 a first encoding process portion for
performing an encoding process including an error
correction code encoding process for data that is input
with a first error correction code;

15 a second encoding process portion for
performing a second encoding process including an error
correction code encoding process with a second error
correction code that is different from the first error
correction code;

20 a modulating process portion for receiving
output data of the first encoding process portion and
output data of the second encoding process portion,
performing a modulating process for the output data of
the first encoding process portion and the output data
of the second encoding process portion, and performing
25 a modulating process for modulating the output data of
the second encoding process portion so that data that
causes the cumulated value of a DC component per unit

period of the output data of the second encoding process portion to deviate is contained in the output data of the second encoding process portion; and

5 a recording portion for receiving output data of the modulating process portion and mixedly recording data encoded with the first error correction code and data decodable with the second error correction code, which is different from the first error correction code.

14. The recording apparatus as set forth in claim
10 13,

wherein the second encoding process portion is configured to perform the error correction code encoding process with the second error correction code and perform an encoding process for data decodable with
15 any of the first error correction code and the second error correction code.

15. The recording apparatus as set forth in claim
14,

20 wherein the modulating process portion is configured to perform the modulating process so that the data decodable with any of the codes supplied from the second encoding process portion contains the data causing the cumulated value of the DC component per unit period of the reproduced data to deviate.

25 16. The recording apparatus as set forth in claim 13, further comprising:

a recording control portion for mixedly

recording the data encoded with the first error correction code and the data decodable with the second error correction code different from the first error correction code, and

5 wherein the control portion is configured to cause the data decodable with the second error correction code to compose at least a part of the encryption key data.

17. The recording apparatus as set forth in claim
10 16,

 wherein the recording control portion is configured to record the data decodable with any of the codes in the data decodable with the second error correction code so that when the data decodable with
15 the second error correction code is decoded with the first error correction code, the data decodable with any of the codes represents a predetermined error pattern in accordance with the encryption key data.

18. The recording method as set forth in claim 17,
20 wherein a part of the data decodable with any of the codes is dummy data.

19. The recording apparatus as set forth in claim
13,

 wherein information that represents the
25 position of an area in which the data encoded with the first error correction code and the data decodable with the second error correction code different from the

first error correction code are mixedly recorded.

20. A reproducing apparatus, comprising:

a head portion for reading data from a recording medium having a first area on which data that has been encoded with a first error correction code is recorded and a second area on which data that has been encoded with the first error correction code and data that is decodable with a second error correction code that is different from the first error correction code are mixedly recorded, wherein data that causes the cumulated value of a DC component per unit period of the data reproduced from the second area to deviate is recorded in the second area;

a decoding process portion for performing a decoding process for data that has been read from the head portion;

an error correcting process portion for performing an error correcting process for output data of the decoding process portion with the first error correction code;

a generating portion for decrypting key data in accordance with a process result of the error correcting process portion; and

a decrypting portion for decrypting encrypted data that has been read from the first area and that has been output from the decoding process portion with the key data decrypted by the generating portion.

21. The reproducing apparatus as set forth in
claim 20,

 wherein an encrypting process has been
performed for the data encoded with the first error
5 correction code recorded on the recording medium in
accordance with the key data,

 wherein the key data has been recorded on the
recording medium, and

 wherein the generating portion is configured
10 to generate another key data for which the key data is
decrypted with an error pattern decoded with the first
error correction code and decrypt the key data with the
other key data.

22. The reproducing apparatus as set forth in
15 claim 21,

 wherein information that represents the
position of the second area has been recorded on the
medium, and

 wherein the apparatus is configured to
20 control the position of the head portion in accordance
with the information representing the position so as to
read the data of the second area.

23. A reproducing method, comprising the steps
of:

25 reading data from a recording medium having a
first area on which data that has been encoded with a
first error correction code is recorded and a second

area on which data that has been encoded with the first error correction code and data that is decodable with a second error correction code that is different from the first error correction code are mixedly recorded,

5 wherein data that causes the cumulated value of a DC component per unit period of the data reproduced from the second area to deviate is recorded in the second area;

10 performing a decoding process for data that has been read;

performing an error correcting process for the decoded data with the first error correction code;

decrypting key data in accordance with a process result of the error correcting process; and

15 decrypting encrypted data that has been read from the first area with the decrypted key data.

24. The reproducing method as set forth in claim 23,

20 wherein an encrypting process has been performed for the data encoded with the first error correction code recorded on the recording medium in accordance with the key data,

wherein the key data has been recorded on the recording medium, and

25 wherein the decrypting step is performed by generating another key data for which the key data is decrypted with an error pattern decoded with the first

error correction code and decrypting the key data with the other key data.

25. The reproducing method as set forth in claim 24,

5 wherein information that represents the position of the second area has been recorded on the medium, and

 wherein the reproducing method further comprises the step of:

10 reading the data of the second area in accordance with the information representing the position.

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